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EXAMINER	
AHMED, SALMAN	

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2419	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/673,056	ALFAKIH ET AL.	
	Examiner	Art Unit	
	SALMAN AHMED	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-15 and 17-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *29 and 30* is/are allowed.

6)☒ Claim(s) *1,7,10-15,21 and 24-28* is/are rejected.

7)☒ Claim(s) *3-6,8,9,17-20,22 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

In view of the PRE-BRIEF CONFERENCE REQUEST filed on 10/3/2008, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Claims 1, 3-15 and 17-30 are pending.

Claims 29 and 30 are allowed.

Claims 1, 7, 10-15, 21 and 24-28 are rejected.

Claims 3-6, 8, 9, 17-20, 22 and 23 are objected to.

Claim Rejections - 35 USC § 103

1. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 7, 10-15, 21, and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinomiya et al. (US7188280) in view of Arslan et al. (5706276) and Ishibashi et al. (US PAT PUB 2003/0147352, hereinafter Ishibashi).

Regarding claim 1, Shinomiya et al. discloses a protecting route design method in a communication network **(see column 1 line 64-66)** comprising:

- receiving one or more demands for service **(see column 4 line 2-4)** in a mesh network **(see column 11 line 17)** comprising a plurality of nodes interconnected by a plurality of links **(see column 4 line 10 and 53)**; and
- mapping each of the one or more demands onto a primary path **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route)** and a restoration path **(see figure 1 protecting communication route)** in the network to generate a path plan for the one or more demands in the network **(see column 3 line 64)**, wherein
- the mapping generates the path plan **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route and column 3 line 64)**

Shinomiya et al. discloses all the subject matter of the claimed invention with the exception of:

- specifying a threshold corresponding to a maximum number of failure-related cross-connections at a node in the network; and
- reduction of a portion of restoration time associated with failure-related cross-connections in the network is taken into account during the mapping,
- based on the specified threshold such that, for all nodes in the mesh network, the number of failure-related cross-connections at each node is no more than the specified threshold.

Arslan et al. from the same or similar fields of endeavor teaches the use of processing decreases the restoration time of the entire circuit **(see Arslan col. 14 lines 45-60)**, and specifies the maximum number of cross-connections **(see Arslan col. 5 lines 13-27)** where this circuit element is of restoration processor **(see Arslan col. 4 lines 46-65)**, and DACS III-2000 **(see Arslan figure 1 ref 107 is connected to restoration processor)**, and in network **(figure 1 ref 100 network)** each DACS digital cross-connect system **(see Arslan figure 1 107 and ref 109 as a node in the network which is connected to restoration processor and in figure 2 shows a circuit state element in restoration processor)**.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the decreases the restoration time and specifies the maximum number of cross-connections as taught by Arslan in the in a communication network of Shinomiya et al. in order to provide additional robustness to the restoration process by way of enhancements to the functionality of the core algorithm manager module **(see Arslan col. 2 lines 8-22)**. Known work (reduction of a portion of restoration time associated with failure-related cross-connections in the network is taken into account during the mapping, based on the specified threshold such that, for all nodes in the mesh network, the number of failure-related cross-connections at each node is no more than the specified threshold) in one field of endeavor (Arslan prior art) may prompt variations of it for use in either the same field or a different one (Shinomiya system/method) based on design incentives (provide additional robustness to the restoration process by way of enhancements to the functionality of the core algorithm

manager module) or other market forces/market place if the variations are predictable to one of ordinary skill in the art.

Arslan although implicitly teaches there is a maximum number of failure related cross-connections in a node in network 100, but Shinomiya and Arslan do not explicitly that there is a maximum number of failure related cross-connections in a node.

Ishibashi in the same or similar field of endeavor teaches (abstract, In a communications network where multiple shared risk link groups are formed by links having a common risk, unreserved bandwidths are defined corresponding to all SRLG's and a maximum bandwidth of each link is set as an initial value of each of the defined unreserved bandwidths when a working path or a protection path of "1+1" or "1:1" recovery type is requested. When a protection path of "shared" recovery type is requested, unreserved bandwidths are defined corresponding to the SRLG's to which the links of its corresponding working path belong and a maximum bandwidth of each link is set as an initial value to each of the defined unreserved bandwidths. The bandwidth of the working or protection path is subtracted from each of the unreserved bandwidths. The request is rejected if a minimum of the subtracted values is smaller than a threshold. Ishibashi teaches (paragraphs 0008-0009, Nodes along the route of the protection path adds 10 Gbps to the links R [1], R [3] and R [5] of the protection path. If the maximum value Max (R [i]) is greater than the maximum bandwidth of the links, the protection path is not established. Since R [i] represents the bandwidth required for a link that belongs to SRLG ID=i, a single SRLG failure can be restored in so far as Max (R [i]) is smaller than the maximum bandwidth of the link. This recovery

method can be classified as a shared recovery type M:N, since all protection paths that pass through a link share the same bandwidth of Max (R [i]). The maximum value R [i] is the whole bandwidth reserved by protection paths. Finally, Ishibashi teaches in pargraph 0067, Link Table of Node A represents maximum number of failure related cross-connections in node A. The link table of node A is shown in FIG. 5. The link table is divided into a plurality of entries corresponding to all unidirectional links that emanate from node A, i.e., links AB, AC and AD identified respectively by a link ID. The entry for each unidirectional link is subdivided into fields for indicating its attributes including a neighbor node ID, a link's maximum bandwidth (MXBW), an SRLG ID to which the link belongs, an SRLG-associated unreserved bandwidth (URBW (i)), an unassigned bandwidth (UABW) of a link, an assigned shared-recovery type protection bandwidth (ASPBW) and an extra-traffic bandwidth (ET/BW).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate in Shinomiya and Arslan's system/method the steps of having a maximum number of failure related cross-connections in a node as suggested by Ishibashi. The motivation is that (as suggested by Ishibashi, paragraphs 0016-0017), such method provides a path establishment method capable of calculating an appropriate route for a path of extra-traffic (unprotected) recovery type and provide a path establishment method that avoids unsuccessful fault-recovery which can occur as a result of fragmented time-slots. Known work (a maximum number of failure related cross-connections in a node) in one field of endeavor (Ishibashi prior art) may prompt variations of it for use in either the same field or a different one (Shinomiya and Arslan's

system/method) based on design incentives (provides a path establishment method capable of calculating an appropriate route for a path of extra-traffic (unprotected) recovery type and provide a path establishment method that avoids unsuccessful fault-recovery which can occur as a result of fragmented time-slots) or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Regarding claim 7, Shinomiya et al. teaches the mapping comprises:

- selecting two node-disjoint paths for each demand **(see figure 1 working communication route and protecting communication route)**, wherein leveling of link loads **(see column 6 line 52-55)** is taken into account during the selecting; and
- for each demand, identifying one of the two node-disjoint paths as the primary path and the other as the restoration path **(see figure 1 working communication route and protecting communication route)**,

and discloses all the subject matter of the claimed invention with the exception of:

- wherein a maximum number of failure-related cross-connections at all nodes in the network is taken into account during the identifying.

Arslan et al. from the same or similar fields of endeavor teaches the use of specifies the maximum number of cross-connections **(see Arslan col. 5 lines 13-27)**. Thus, it would

have been obvious to one of ordinary skill in the art at the time of the invention to use the decreases the restoration time and specifies the maximum number of cross-connections as taught by Arslan in the in a communication network of Shinomiya et al. in order to provide additional robustness to the restoration process by way of enhancements to the functionality of the core algorithm manager module **(see Arslan col. 2 lines 8-22)**.

Regarding claim 10, Shinomiya et al. teaches the selecting of the two node-disjoint paths for each demand and the identifying, for each demand, of the one of the two node-disjoint paths as the primary path **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route)** and the other as the restoration path **(see figure 1 protecting communication route)** are implemented using mixed-integer programming **(see column 11 line 12 where CPU corresponds to programming; it is inherent that CPU is run by a program, and column 6 line 50-57 teaches parameter of each node which corresponds to mixed-integer)**.

Regarding claim 11, Shinomiya et al. teaches the selecting of the two node-disjoint paths for each demand and the identifying, for each demand, of the one of the two node-disjoint paths as the primary path **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route)** and the other as the restoration path **(see figure 1 protecting communication route)** are implemented using genetic programming **(see column 11 line 12 where CPU corresponds to programming; it is inherent that CPU is run by**

a program, and column 6 line 50-57 teaches parameter of each node which corresponds to mixed-integer).

Regarding claim 12, Shinomiya et al. teaches the selection of the two node-disjoint paths for each demand and the identifying, for each demand, of the one of the two node-disjoint paths as the primary path **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route)** and the other as the restoration path **(see figure 1 protecting communication route)** are implemented using a commercial solver **(see column 8 line 48-57)**.

Regarding claim 13, Shinomiya et al. teaches the mapping involves demand bundling, wherein demands having a common source node and a common destination node are grouped **(see column 4 line 2-6 it is inherent that demands would have a common source node and a common destination node)** and routed along a single pair of disjoint primary and restoration paths **(see figure 1 working communication route and protecting communication route)** and at least a portion of connection signaling for the group is carried out jointly **(see column 4 line 2-6)**.

Regarding claim 14, Shinomiya et al. teaches the mapping involves traffic aggregation, wherein multiple low-rate channels in the network are consolidated into a high-rate channel and rerouting of the high-rate channel requires fewer cross-connections than rerouting of the multiple low-rate channels **(see column 4 line 22-27)**.

Regarding claim 15, Shinomiya et al. teaches a network manager for a mesh network comprising a plurality of nodes interconnected by a plurality of links, the network manager **(see figure 4 box 10 and column 7 line 27 corresponds to network manager)** comprising:

- means for receiving one or more demands for service **(see column 4 line 2-4)** in the network **(see column 11 line 17)**; and
- means for mapping each of the one or more demands onto a primary path **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route)** and a restoration path **(see figure 1 protecting communication route)** in the network to generate a path plan for the one or more demands in the network **(see column 3 line 64)**, wherein
- the means for mapping generates the path plan **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route and column 3 line 64)**

Shinomiya et al. discloses all the subject matter of the claimed invention with the exception of:

- means for specifying a threshold corresponding to a number of failure-related cross-connections; and

- reduction of a portion of restoration time associated with failure-related cross-connections in the network is taken into account during the mapping,
- based on the specified threshold such that, for all nodes in the mesh network, the number of failure-related cross-connections at each node is less than the specified threshold.

Arslan et al. from the same or similar fields of endeavor teaches the use of processing decreases the restoration time of the entire circuit **(see Arslan col. 14 lines 45-60)**, and specifies the maximum number of cross-connections **(see Arslan col. 5 lines 13-27)** where this circuit element is of restoration processor **(see Arslan col. 4 lines 46-65)**, and DACS III-2000 **(see Arslan figure 1 ref 107 is connected to restoration processor)**, and in network **(figure 1 ref 100 network)** each DACS digital cross-connect system **(see Arslan figure 1 107 and ref 109 as a node in the network which is connected to restoration processor and in figure 2 shows a circuit state element in restoration processor)**.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the decreases the restoration time and specifies the maximum number of cross-connections as taught by Arslan in the in a communication network of Shinomiya et al. in order to provide additional robustness to the restoration process by way of enhancements to the functionality of the core algorithm manager module **(see Arslan col. 2 lines 8-22)**. Known work (means for specifying a threshold corresponding to a number of failure-related cross-connections; and reduction of a portion of

restoration time associated with failure-related cross-connections in the network is taken into account during the mapping, based on the specified threshold such that, for all nodes in the mesh network, the number of failure-related cross-connections at each node is less than the specified threshold) in one field of endeavor (Arslan prior art) may prompt variations of it for use in either the same field or a different one (Shinomiya system/method) based on design incentives (provide additional robustness to the restoration process by way of enhancements to the functionality of the core algorithm manager module) or other market forces/market place if the variations are predictable to one of ordinary skill in the art.

Arslan although implicitly teaches there is a maximum number of failure related cross-connections in a node in network 100, but Shinomiya and Arslan do not explicitly that there is a maximum number of failure related cross-connections in a node.

Ishibashi in the same or similar field of endeavor teaches (abstract, In a communications network where multiple shared risk link groups are formed by links having a common risk, unreserved bandwidths are defined corresponding to all SRLG's and a maximum bandwidth of each link is set as an initial value of each of the defined unreserved bandwidths when a working path or a protection path of "1+1" or "1:1" recovery type is requested. When a protection path of "shared" recovery type is requested, unreserved bandwidths are defined corresponding to the SRLG's to which the links of its corresponding working path belong and a maximum bandwidth of each link is set as an initial value to each of the defined unreserved bandwidths. The bandwidth of the working or protection path is subtracted from each of the unreserved

bandwidths. The request is rejected if a minimum of the subtracted values is smaller than a threshold. Ishibashi teaches (paragraphs 0008-0009, Nodes along the route of the protection path adds 10 Gbps to the links R [1], R [3] and R [5] of the protection path. If the maximum value Max (R [i]) is greater than the maximum bandwidth of the links, the protection path is not established. Since R [i] represents the bandwidth required for a link that belongs to SRLG ID=i, a single SRLG failure can be restored in so far as Max (R [i]) is smaller than the maximum bandwidth of the link. This recovery method can be classified as a shared recovery type M:N, since all protection paths that pass through a link share the same bandwidth of Max (R [i]). The maximum value R [i] is the whole bandwidth reserved by protection paths. Finally, Ishibashi teaches in pargraph 0067, Link Table of Node A represents maximum number of failure related cross-connections in node A. The link table of node A is shown in FIG. 5. The link table is divided into a plurality of entries corresponding to all unidirectional links that emanate from node A, i.e., links AB, AC and AD identified respectively by a link ID. The entry for each unidirectional link is subdivided into fields for indicating its attributes including a neighbor node ID, a link's maximum bandwidth (MXBW), an SRLG ID to which the link belongs, an SRLG-associated unreserved bandwidth (URBW (i)), an unassigned bandwidth (UABW) of a link, an assigned shared-recovery type protection bandwidth (ASPBW) and an extra-traffic bandwidth (ET/BW).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate in Shinomiya and Arslan’s system/method the steps of having a maximum number of failure related cross-connections in a node as suggested by

Ishibashi. The motivation is that (as suggested by Ishibashi, paragraphs 0016-0017), such method provides a path establishment method capable of calculating an appropriate route for a path of extra-traffic (unprotected) recovery type and provide a path establishment method that avoids unsuccessful fault-recovery which can occur as a result of fragmented time-slots. Known work (a maximum number of failure related cross-connections in a node) in one field of endeavor (Ishibashi prior art) may prompt variations of it for use in either the same field or a different one (Shinomiya and Arslan's system/method) based on design incentives (provides a path establishment method capable of calculating an appropriate route for a path of extra-traffic (unprotected) recovery type and provide a path establishment method that avoids unsuccessful fault-recovery which can occur as a result of fragmented time-slots) or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Regarding claim 21, Shinomiya et al. teaches the mapping comprises:

- selecting two node-disjoint paths for each demand **(see figure 1 working communication route and protecting communication route)**, wherein leveling of link loads **(see column 6 line 52-55)** is taken into account during the selecting; and
- for each demand, identifying one of the two node-disjoint paths as the primary path and the other as the restoration path **(see figure 1 working communication route and protecting communication route)**,

and discloses all the subject matter of the claimed invention with the exception of:

- wherein a maximum number of failure-related cross-connections at all nodes in the network is taken into account during the identifying.

Arslan et al. from the same or similar fields of endeavor teaches the use of specifies the maximum number of cross-connections **(see Arslan col. 5 lines 13-27)**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the decreases the restoration time and specifies the maximum number of cross-connections as taught by Arslan in the in a communication network of Shinomiya et al. in order to provide additional robustness to the restoration process by way of enhancements to the functionality of the core algorithm manager module **(see Arslan col. 2 lines 8-22)**.

Regarding claim 24, Shinomiya et al. teaches the means for performing the selection and the means for identifying the primary **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route)** and restoration paths **(see figure 1 protecting communication route)** are implemented using mixed-integer programming is used in each of the selecting and the identifying **(see column 11 line 12 where CPU corresponds to programming; it is inherent that CPU is run by a program, and column 6 line 50-57 teaches parameter of each node which corresponds to mixed-integer)**.

Regarding claim 25, Shinomiya et al. teaches the means for performing the selection and the means for identifying the primary **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route)** and restoration paths **(see figure 1 protecting communication route)** are implemented using genetic programming **(see column 11 line 12 where CPU corresponds to programming; it is inherent that CPU is run by a program, and column 6 line 50-57 teaches parameter of each node which corresponds to mixed-integer)**.

Regarding claim 26, Shinomiya et al. teaches the means for performing the selection and the means for identifying the primary **(see column 4 line 8-9 where the term working communication route corresponds to primary and see figure 1 working communication route)** and restoration paths **(see figure 1 protecting communication route)** are implemented using a commercial solver **(see column 8 line 48-57)**.

Regarding claim 27, Shinomiya et al. teaches the mapping involves demand bundling, wherein demands having a common source node and a common destination node are grouped **(see column 4 line 2-6 it is inherent that demands would have a common source node and a common destination node)** and routed along a single pair of disjoint primary and restoration paths **(see figure 1 working communication route and protecting communication route)** and at least a portion of connection signaling for the group is carried out jointly **(see column 4 line 2-6)**.

Regarding claim 28, Shinomiya et al. teaches the mapping involves traffic aggregation, wherein multiple low-rate channels in the network are consolidated into a high-rate channel and rerouting of the high-rate channel requires fewer cross-connections than rerouting of the multiple low-rate channels **(see column 4 lines 22-27)**.

Allowable Subject Matter

4. Claim 3-6, 8-9, 17-20, and 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 29 and 30 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SALMAN AHMED whose telephone number is (571)272-8307. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. A./

Examiner, Art Unit 2419

/Edan Orgad/

Supervisory Patent Examiner, Art Unit 2419